

1 April 1970

MEMORANDUM FOR: [REDACTED]

25X1A

SUBJECT : Notes on the Meeting of the MCGWG,
31 March 1970

1. The Working Group was called together in order to discuss the Doppler beacon problem and to consider the possibility of forwarding a paper that would recommend that the Doppler beacon, when used with the KH-4B system, be left on all the time.

25X1A 2. [REDACTED] who has been a leader in this program and is in DIAMC, briefed the Working Group on the locations of the 21 stations with special emphasis on those which are peripheral to the bloc. He explained the manner in which the beacon was programmed to be on all the time when passing over the southern hemisphere, but only when the vehicle was 2 degrees or more above the horizon with respect to receiving stations in the northern hemisphere. Because of this programming, some emissions from the beacon might be acquired within the bloc in a few border areas. The operational reason for restricting the beacon signals in the northern hemisphere was because of conflict with another special piece of equipment being carried on Mission 1109. He noted that there had been a short period of break in communications between the West Coast and the Naval Weapons Laboratory which directs the Doppler stations. This, however, was of little consequence.

TCS-5154-70

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3. It was interesting to note that in asking for the establishment of Doppler receiving stations the governments of the countries involved were told that these stations were needed to receive the signals from low-altitude satellites for the purpose of undertaking atmospheric density studies and earth gravity model studies. The Russians were aware of at least some of these requests and indicated no objection.

4. Doyle stated that the use of the Doppler beacon on Mission 1109 was highly satisfactory and that preliminary evaluation indicated substantial improvement in point positioning. In examining the take of the first bucket of Mission 1109, it was found that 493 of the 1,135 Category I point targets and 1,503 of the 4,745 Category II point targets were covered. It is anticipated that the take of the second bucket will provide another 10 percent of the point targets. ACIC is evaluating this take as rapidly as possible and many of the targets covered may not have to be recovered in the future.

5. Seven points in the [REDACTED] area were selected for determining accuracy from precise ground control. The greatest errors obtained from passes over these points during Mission 1109 by use of the Doppler beacon method were 100 feet of latitude and 200 feet of longitude. This is well within the precision hoped for in using this approach over the bloc and in other foreign areas.

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6. The Group then addressed itself to a working draft of a paper to be sent to the Chairman of COMIREX. An LDX of this paper is attached. *(See MC+G file for MCGWG-D-19, 31 Mar 70, TCS-654515-70)*

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7. It is interesting that, in December, the Soviets placed an order with a U.S. firm for a shipboard pulse doppler sonar navigation system designed for integration with a satellite receiver for operation with the Navy navigational satellite system.



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Attachment